


Exhibit 6

AT&T – Smartphones (see product list at end for relevant models) Infringement of the '105 patent	
Claim 1	Evidence & Specification Support
1. A method comprising:	<p>The AT&T smartphone performs a method of mobile printing.</p> <p>For example, the AT&T smartphone comes with mobile printing functionality built-in for operating systems Android 8 and later.</p>  <p>Print From Android 8 and Higher FAQ</p> <p>How do I set up my Android 8 or higher device for mobile printing?</p> <p><u>Android 8 and higher devices are ready to print – no setup necessary!</u></p> <p><u>Mobile printing is built in. You have core printing capability using the Default Print Service on your Android device, without needing to install a print service or download a mobile printing app.</u></p> <p>[1]</p> <p>Mobile printing as supported by Mopria standards uses the set of Internet Printing Protocols (IPP).</p> <p>What Computers/Devices Support IPP Everywhere™?</p> <p>All computers running CUPS 1.5 or later support IPP Everywhere, which includes all major Linux distributions, ChromeOS, Open Solaris, *BSD, and macOS®. <u>In addition, most mobile devices now support printing via IPP using IPP Everywhere or a related vendor standard such as AirPrint® or Mopria®.</u></p> <p>[6]</p>
receiving, by a computing	The AT&T smartphone receives, from a remote printer, data

device from a remote printer, data identifying one or more characteristics of the remote printer, wherein the computing device comprises at least one processor and memory and is communicatively coupled to the remote printer via a network;

identifying one or more characteristics of the remote printer. The AT&T smartphone is a computing device that includes a processor and memory and is communicatively coupled to the remote printer via a network.

For example, the smartphone automatically discovers printers nearby that are certified for mobile printing by the Mopria Alliance. Most major brands of printers include Mopria certified printer models.

What printers does my Android device support?

By default, your Android 8 and higher device supports all printers that are Mopria certified. Your Android device will automatically discover any nearby Mopria certified printer.

[1]

To search for Mopria certified products by brand, click on the manufacturer logo or use the Manufacturer search box below.

Canon



xerox



brother
at your side

CSR
Push every boundary.™



EPSON
EXCEED YOUR VISION

FUJI XEROX

KYOCERA

Lexmark

PANTUM
The New Way to Printing

RICOH

SAMSUNG

SHARP

TOSHIBA

YSOFT

[1]

The AT&T Axia smartphone uses the Android 8.0 operating system, has a Qualcomm MSM8909 central processor and 1GB of RAM memory.



AT&T AXIA - dark blue - 4G - 16 GB - GSM - smartphone | QS5509A

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[15] SPECS

CELLULAR

Technology	WCDMA (UMTS) / GSM
Type	smartphone (Android OS)
Navigation	A-GPS, GPS
Band	WCDMA (UMTS) / GSM 850/900/1800/1900
Mobile Broadband Generation	4G
Phone Form Factor	touch
Service Provider	not specified
Operating System Family	Android
Operating System	Android 8.0 Oreo (Go edition)
Input Device	Multi-touch

[15]

PROCESSOR

Clock Speed	1.1 GHz
Processor Number	MSM8909
Manufacturer	QUALCOMM
Processor Core Qty	quad-core

[15]

MEMORY

RAM	1 GB
Supported Flash Memory Cards	microSDHC, microSDXC - up to 64 GB

	<p>With IPP (Internet Printing Protocol), URI's are used to identify a printer [2]. Other identifying data are the printer's DNS hostname and network address. A printer server would receive these from a printer during the discovery process. (e.g. via mDNS, DNS-SD, Bonjour etc.).</p> <p>IPP also supports printer description attributes, including printer make and model, manufacturer, location etc. [3]. These attributes would be sent to a client from the printer when requested by the client.</p> <p>Specification Support Examples given in the patent of data identifying one or more characteristics of a printer are printer model, serial number and firmware version number. Such data is used to identify the printer for the purpose of registering it with a client (e.g. smartphone).</p> <p>According to the patent in the description concerning Figs. 7 and 8: "The data identifying the characteristics of the printer includes the serial number, the model number and the firmware number (revision, model) of the printer 30. The characteristics of the printer are compared to data in a database in order to verify registration (step 610, FIG. 8). If the characteristics of the printer 30 are found in the database, a specified number for the data items to be printed, and a specified number for the print data portions to be downloaded are sent to the printer 30 (step 630, FIG. 8). "</p>
<p>verifying, by the computing device, that the remote printer has been registered with the computing device; and</p>	<p>The AT&T smartphone verifies that the remote printer has been registered with the smartphone.</p> <p>For example, as part of the printer discovery process, and afterwards, the smartphone verifies that the printer is registered with it. Verification can be in terms of keeping the listing of already discovered printers updated, as well as part of the authentication</p>

procedure when secure printing (e.g. IPPS over HTTPS) is used.
 What is the difference between the Default Print Service in Android 8 and higher and downloading the full Mopria Print Service app?

	Android Default Print Service (version 8.0 and higher)	Mopria Print Service
Discovery (e.g., aggregated packets)	✓	✓
Android for Work Support		✓
Manually Add Printer	✓	✓
Wi-Fi Direct Print	Android 9, 10 and 11	✓
Secure Print (IPPS)	IPPS if available	✓
Share-to-Print Images & PDFs	Android 11	✓
Share-to-Print Office, TIFF & Text Files, Web Pages		✓
Dark Mode	Android 10 and 11	Android 10 and 11

[1]

As a convenience, printer URIs are kept by clients (e.g. smartphones) in a similar way that bookmarks are kept in web browsers. [2]
 Therefore, after a client has discovered a printer, the record of the printer's URI in the client's database (or cache) could be considered a registration of the printer.

Furthermore, there are scenarios where the printer would send its URI to a client that already knows of the printer. For example, if the client is conducting continuous multicast DNS querying to determine all the reachable printers on a network, a printer will respond with its URI when the client already knows of the printer (despite known answer

suppression) if the RR TTL (resource record time to live) for the printer (resource) is less than half of the original TTL. In that case, when the client receives such a response to the query, the client updates the record for the printer in its cache with the new TTL.

According to the Internet Standard RFC6762 - Multicast DNS [5]

“5.2. Continuous Multicast DNS Querying

...

Imagine some hypothetical software that allows users to discover network printers. The user wishes to discover all printers on the local network, not only the printer that is quickest to respond. When the user is actively looking for a network printer to use, they open a network browsing window that displays the list of discovered printers. It would be convenient for the user if they could rely on this list of network printers to stay up to date as network printers come and go, rather than displaying out-of-date stale information, and requiring the user explicitly to click a "refresh" button any time they want to see accurate information (which, from the moment it is displayed, is itself already beginning to become out-of-date and stale). If we are to display a continuously updated live list like this, we need to be able to do it efficiently, without naive constant polling, which would be an unreasonable burden on the network.

...

Therefore, when retransmitting Multicast DNS queries to implement this kind of continuous monitoring, the interval between the first two queries MUST be at least one second, the intervals between successive queries MUST increase by at least a factor of two, and the querier MUST implement Known-Answer Suppression, as described below in Section 7.1. “ [RFC6762] [5]

“7.1. Known-Answer Suppression

	<p>...</p> <p>A Multicast DNS responder MUST NOT answer a Multicast DNS query if the answer it would give is already included in the Answer Section with an RR TTL at least half the correct value. If the RR TTL of the answer as given in the Answer Section is less than half of the true RR TTL as known by the Multicast DNS responder, the responder MUST send an answer so as to update the querier's cache before the record becomes in danger of expiration." [RFC6762][5]</p>
<p>sending, from the computing device to the remote printer, an indication of a number of data items to be printed and an indication of a number of print data items to be downloaded, wherein the remote printer is configured to download the print data items.</p>	<p>The AT&T smartphone sends, to the remote printer, an indication of a number of data items to be printed and an indication of a number of print data items to be downloaded. The remote printer is configured to download the print data items.</p> <p>For example, the smartphone sends information to the printer such as the number of copies of an item to be printed and/or the page range of pages to be printed. Each document or pages in a range are items that need to be retrieved, or downloaded, over a network by the printer. The number of these items to be printed depends on the number of copies that were specified.</p>

What is the difference between the Default Print Service in Android 8 and higher and downloading the full Mopria Print Service app?

	Android Default Print Service (version 8.0 and higher)	Mopria Print Service
Color/B&W	✓	✓
Number of Copies	✓	✓
Two-sided Printing	✓	✓
Orientation	✓	✓
Page Print Range	✓	✓
Media Size	✓	✓

[1]

In computer networks, download means to receive data from a remote system, typically a server such as a web server, an FTP server, an email server, or other similar system. This contrasts with uploading, where data is sent to a remote server. A download is a file offered for downloading or that has been downloaded, or the process of receiving such a file. [7]

Specification Support

The patent does not differentiate between the client pushing a document to the printer (as in the Send-Document request) and the printer pulling the document from a server (as in the Send-URI request). Both could be considered as downloading because in both cases the printer receives the document over a network and saves it in its memory.

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Product List:

Fusion Z (V340U)
Motivate (V341U)
Maestro Plus (V350U), Maestro (U202AA)
Calypso (U318AA)
RADIANT Max (U705AA), RADIANT Core (ATTU304AA)
AXIA (QS5509A)

References:

[1] Print From Android 8 and Higher FAQ

<https://mopria.org/androidfaq>

[2] PWG 5100.19-2015 - IPP Implementor's Guide v2.0 (IG) (Updates RFC 3196)

<https://ftp.pwg.org/pub/pwg/candidates/cs-ippig20-20150821-5100.19.pdf>

[3] RFC8011 - Internet Printing Protocol/1.1: Model and Semantics (2017)

<https://tools.ietf.org/html/rfc8011>

[4] How to Use the Internet Printing Protocol

<https://www.pwg.org/ipp/ippguide.html>

[5] RFC6762 - Multicast DNS (2013)

<https://tools.ietf.org/html/rfc6762>

[6] IPP Everywhere Frequently Asked Questions

<https://www.pwg.org/ipp/evefaq.html#:~:text=All%20computers%20running%20CUPS%201.5,AirPrint%20or%20Mopria%20>

[7] Download - Wikipedia

[https://searchnetworking.techtarget.com/definition/downloading#:~:text=Downloading%20is%20the%20transmission%20of,computer\)%20and%20to%20receive%20it.](https://searchnetworking.techtarget.com/definition/downloading#:~:text=Downloading%20is%20the%20transmission%20of,computer)%20and%20to%20receive%20it.)

[8] Fusion Z (V340U)

<https://www.att.com/device-support/article/wireless/KM1420466/ATT/ATTV340U>

[9] Motivate (V341U)

<https://www.att.com/device-support/article/wireless/KM1424380/ATT/V341U/>

[10] Maestro Plus (V350U)

<https://www.att.com/device-support/article/wireless/KM1424380/ATT/ATTV350U/>

[11] Maestro (U202AA)

<https://www.att.com/device-support/article/wireless/KM1373535/ATT/U202AA/>

[12] Calypso (U318AA)

<https://www.att.com/device-support/article/wireless/KM1398439/ATT/ATTU318AA/>

[13] RADIANT Max (U705AA)

<https://www.att.com/device-support/article/wireless/KM1398275/ATT/ATTU705AA/>

[14] RADIANT Core (ATTU304AA)

<https://www.att.com/device-support/article/wireless/KM1358361/ATT/ATTU304AA/>

[15] AXIA (QS5509A)

<https://www.cnet.com/products/at-t-axia-dark-blue-4g-16-gb-gsm-smartphone/>